WHAT IS CLAIMED IS:

1. A throttle device for an internal-combustion engine which is driven by an electric actuator to open and close a throttle valve to control the amount of intake air aspirated by the internal-combustion engine, said throttle device in which, on one surface of a side wall of a throttle body, a space for mounting a reduction gear mechanism which transmits the power of said electric actuator to a throttle valve shaft and a gear cover for covering said space for mounting said reduction gear mechanism are provided; and a throttle sensor for detecting the throttle valve opening is built inside of said gear cover to cover said throttle sensor with said sensor cover; a rotor shaft hole of said throttle sensor is exposed to the outside through said sensor cover; and as said gear cover is attached to said side wall of said throttle body, one end of said throttle valve shaft will fit in said shaft hole of said rotor.

2. A throttle device for an internal-combustion engine which is driven by an electric actuator to open and close a throttle valve to control the amount of intake air aspirated by the internal-combustion engine, said throttle device in which, a space for mounting a reduction gear mechanism which transmits the power of said electric actuator to said throttle valve shaft and a frame which is so formed as to edge said space for mounting said reduction gear mechanism are provid d on one surface of said side wall of said throttle body; said gear cov r being

attached on said frame to cover said space for mounting said reduction gear mechanism; inside of said gear cover is built a throttle sensor covered with a sensor cover, for detecting the throttle valve opening; said rotor shaft hole of said throttle sensor being exposed to the outside through said sensor cover; and with said gear cover attached on said side wall of said throttle body, one end of said throttle valve shaft fits in said shaft hole of said rotor.

3. A throttle device for an internal-combustion engine according to claim 1 or 2, wherein said rotor shaft hole has a flat surface in a wall surface; one end of said throttle valve shaft which fits in said shaft hole also has a flat surface which engages with said shaft hole; a plate spring is installed in a hole for fitting said throttle valve shaft; and said plate spring being elastically deformed to insert one end of said valve shaft into said shaft hole.

4. A throttle device for an internal-combustion engine according to any one of claims 1 to 3, wherein, one the inner surface of said gear cover, a recessed space is formed for holding said throttle sensor; in said recessed space, a substrate with a resistor formed as a potentiometer element, a rotor having a brush which contacts said resistor to take out a potential difference as a sensor detection signal, and a rotor retaining spring are arranged between said gear cover and said sensor cover; a projection-like shaft portion formed on one

surface of said rotor is fitted in a hole provided in the inner surface of said gear cover through a hole formed in said substrate; and between said rotor and said sensor cover, said rotor retaining spring being interposed, elastically deformed with a force of said sensor cover and said rotor.

5. A throttle device for an internal-combustion engine according to claim 4, wherein said rotor retaining spring is a waved washer.

6. A throttle device for an internal-combustion engine which is driven by an electric actuator to open and close a throttle valve to control the amount of intake air aspirated by the internal-combustion engine, said throttle device in which, on one surface of a side wall of a throttle body, a space for mounting a reduction gear mechanism which transmits the power of said electric actuator to a throttle valve shaft and a gear cover for covering said space are provided; and a throttle sensor for detecting the throttle valve opening is built, covered with said sensor cover, inside of said gear cover; a rotor shaft hole of said throttle sensor is exposed out through said sensor cover; one end of said throttle valve shaft fits in said rotor shaft hole by elastically deforming a spring (hereinafter referred to as said fitting spring) inserted in said shaft hole; and said rotor being retained by a rotor retaining spring interposed between said rotor and said sensor cover; and let F1 be a spring force of said fitting spring which acts on said throttle valve

shaft, F2 be th spring force of said rotor retaining spring, and F3 be said spring force F1 of said fitting spring multiplied by the coefficient of friction $\sigma 1$ between said throttle valve shaft and said shaft hole, and F1 and F2 load are so set as to achieve the relation of F2>F3.

7. A throttle device for an internal-combustion engine which is driven by an electric actuator to open and close a throttle valve to control the amount of intake air aspirated by the internal-combustion engine, said throttle device in which, on one surface of a side wall of a throttle body, a space for mounting a reduction gear mechanism which transmits the power of said electric actuator to a throttle valve shaft and a gear cover for covering said space for mounting said reduction gear mechanism are provided; and a throttle sensor for detecting the throttle valve opening is built, covered with said sensor cover, inside of said gear cover; a rotor shaft hole of said throttle sensor is exposed out through said sensor cover; one end of said throttle valve shaft fits in said rotor shaft hole by elastically deforming a spring (hereinafter referred to as said fitting spring) inserted in said shaft hole; and said rotor being retained by a rotor retaining spring interposed between said rotor and said sensor cover; and let F1 be a spring force of said fitting spring which acts on said throttle valve shaft, F2 be the spring force of said rotor retaining spring, F4 be a turning torque required to turn said rotor (F4 = said spring

force F2 of said rotor retaining spring × said friction force σ2 during rotor rotation), and F5 be a turning torque against said spring force F1 of said fitting spring, and F1 and F2 load are so set as to achieve the relation of F5>F4.

8. A throttle device for an internal-combustion engine which is driven by an electric actuator to open and close a throttle valve to control the amount of intake air aspirated by the internal-combustion engine, said throttle device in which, one end of said throttle valve shaft projects out of the side wall of a throttle body for engagement with a rotor of a throttle sensor for detecting a throttle valve opening; and the other end of said throttle valve shaft also projects out of the side wall of said throttle body, said projecting end portion having a flat surface.

9. A throttle device for an internal-combustion engine which is driven by an electric actuator to open and close a throttle valve to control the amount of intake air aspirated by the internal-combustion engine, said throttle device in which, on one surface of a throttle body side wall, a space is provided for mounting a reduction gear mechanism which transmits the power of an electric actuator to a throttle valve shaft; a motor terminal of said electric actuator is disposed, appearing in said space for mounting said reduction gear mechanism; on other hand, in a gear cover made of a synthetic resin for covering said space for mounting said reduction gear mechanism, a

conductor is embedded by resin molding; one end of said conductor serves as a connector terminal for connection with an external power source, while the other end is a connecting terminal for connection with said motor terminal of said electric actuator; and said connecting terminal protrudes out into the inner surface of said gear cover and is connected with said motor terminal via a joint-type connecting hardware.

10. A throttle device for an internal-combustion engine according to claim 9, wherein said joint-type connecting hardware has flexible directivity.

11. A throttle device for an internal-combustion engine according to claim 9 or 10, wherein said gear cover is partly comprised of a two-stratum structure having inner and outer strata; said inner stratum being of a plate shape separately pre-molded; a conductor portion excepting said connector terminal and said connecting terminal is embedded by this molding; and a plate forming said inner stratum is formed integrally with a gear cover body having said outer stratum by molding of said gear cover body.